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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/657,406      | 09/08/2003  | Donald Matthews      | Matthews            | 9924             |

7590 05/06/2004  
Scott P. Zimmerman  
P.O. Box 3822  
Cary, NC 27519

EXAMINER

SMITH, MATTHEW J

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3672

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/657,406

Applicant(s)

MATTHEWS, DONALD

Examiner

Matthew J. Smith

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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The specification recites the serial number of the parent application but not the current status (Pat. no. 6675716). Please insert this information in response to this Office action.

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: the claimed "toothed cone" and "blade" from the toothed cone are not clearly described or illustrated. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kandle (2401250) in view of Goodrich (2749102) and Gredell (2838285).

Kandle discloses an earth drill bit at the bottom of an auger flight comprising outer blade ring 3, hub 6, spoke 11 having a blade 15 and a center drill with a bit-shaped tip 27. This reference does not disclose teeth on the ring, blades on each spoke, a toothed cone, or randomly spaced teeth on a ring.

Goodrich presents randomly spaced teeth 13 on an outer ring 14 of an auger drill head and a toothed 24 cone-shaped portion at the pilot drill 21.

Gredell displays a cone-shaped member having blade portion 9 near a pilot bit 15 attached to an auger bit end.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the Kandle pilot bit by adding both a cone shaped portion and having randomly spaced teeth on the Kandle ring 3 plus add a tooth on the Kandle pilot bit and a blade on the Kandle pilot bit, as presented by Goodrich and displayed by Gredell, respectively, in order to provide for attacking minerals (Goodrich, col. 2, line 66) and to dig into the ground progressively (Gredell, col. 4, lines 23-34).

It would have been further obvious to attach blades to each spoke in order to both be more efficient and the duplication of parts is well known.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kandle in view of Goodrich and Gredell as applied to claim 1 above, and further in view of Robbins (2650083).

The combination discloses a modified bit having a toothed ring and reaming portion on the pilot bit but not equally spaced teeth on the ring.

Robbins shows equally spaced teeth 23 on a ring 20 and a toothed 14 cone as part of an auger bit with a pilot bit section.

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It would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify the modified Kandle earth drill by arranging the ring 3 teeth equally, as shown by Robbins, in order to cut a kerf (Robbins, col. 1, line 10).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Benetti et al. (3508622) show pilot bit with toothed enlarging portion before toothed full diameter portion. Gruere (3092190) discusses the auger rotating at a different speed than the pilot bit (col. 1, lines 19-30).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Smith whose telephone number is 703-305-5135. The examiner can normally be reached on T-F, 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

MJS *MJS*  
27 April 2004